



03-26-04

PATENT
ATTORNEY DOCKET NO. 03848-00094

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Martin Goldberg, Martin Diggelman,)
Earl A. Hubbell, Glenn McGall,)
Nam Quoc Ngo, MacDonald Morris,)
Mel Yamamoto, Jennifer Tan, and)
Richard P. Rava)
Serial No.: 10/722,032)
Filed: November 25, 2003)
Title: SUBSTRATE PREPARATION PROCESS)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL LETTER

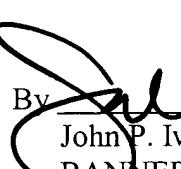
In regard to the above identified application, we are transmitting herewith the attached:

1. Information Disclosure Statement,
2. Form PTO-1449 (3 pages), and
3. Return postcard.

With respect to additional fees, no additional fee is required. The Commissioner is hereby authorized to charge any additional fees or credit overpayment to Deposit Account No. 19-0733.

Respectfully submitted,

Dated: March 25, 2004

By 
John P. Iwanicki, Reg. No. 34,628
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USSN 10/722,032
Express Mail Receipt No. EV 436812846 US

EV436812846US



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Examiner:

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Art Unit:

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INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 C.F.R. §§ 1.97-1.99, Applicants hereby submit the enclosed PTO Form 1449. This Information Disclosure Statement is in compliance with the continuing duty of candor as set forth in 37 C.F.R. § 1.56 and is being filed before receipt of a first Office Action on the merits.

Under 35 USC §120, this application relies on the earlier filing dates of application serial number 09/716,507, filed on November 20, 2000, now U.S. Patent No. 6,706,875; application serial number 09/244,568, filed on February 4, 1999, now U.S. Patent No. 6,307,042; and application serial number 08/634,053, filed on April 17, 1996, now U.S. Patent No. 5,959,098.

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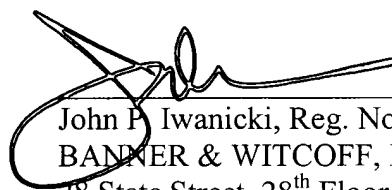
Hard copies of the references identified on the PTO Form 1449 were submitted to and/or cited by the Office in the prior patent applications and, therefore, are not provided in this application.

In the judgment of the undersigned, portions of the listed references may be material to the Examiner's consideration of the presently pending claims. However, the references have not been reviewed in sufficient detail to make any other representation and, in particular, no representation is intended as to the relative importance of any portion of the references. This statement is not a representation that the listed references have effective dates early enough to be "prior art" within the meaning of 35 U.S.C. § 102 or § 103.

Please apply any charges or credits to Deposit Account No. 19-0733.

Respectfully submitted,

Dated: March 25, 2004


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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet

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of

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Complete if Known

Application Number	10/722,032
Filing Date	November 25, 2003
First Named Inventor	Martin Goldberg
Group Art Unit	
Examiner Name	

Attorney Docket Number 03848-00094

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
1	US- 4,016,855		04-12-1977	Mimata	
2	US- 4,401,796		08-30-1983	Itakura	
3	US- 4,458,066		07-03-1984	Caruthers et al.	
4	US- 4,500,707		02-19-1985	Caruthers et al.	
5	US- 4,507,433		03-26-1985	Miller et al.	
6	US- 5,143,854		09-01-1992	Pirrung et al.	
7	US- 5,202,231		04-13-1993	Drmanac et al.	
8	US- 5,242,974		09-07-1993	Holmes	
9	US- 5,384,261		01-24-1995	Winkler et al.	
10	US- 5,424,186		06-13-1995	Fodor et al.	
11	US- 5,445,934		08-29-1995	Fodor et al.	
12	US- 5,489,678		02-06-1996	Fodor et al.	
13	US- 5,492,806		02-20-1996	Drmanac et al.	
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17	US- 5,545,531		08-13-1996	Rava et al.	
18	US- 5,556,752		09-17-1996	Lockhart et al.	
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21	US- 5,639,603		06-17-1997	Dower et al.	
22	US- 5,667,972		09-16-1997	Drmanac et al.	
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24	US- 5,700,637		12-23-1997	Southern	
25	US- 5,723,289		03-03-1998	Eaton et al.	

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Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
26	GB 2182336		05-13-1987	Nippon Telegraph		
27	WO 92/10092		06-25-1992	Affymax Technologies		
28	WO 93/09668		05-27-1993	Affymax Technologies		
29	WO 94/10128		05-11-1994	Affymax Technologies		

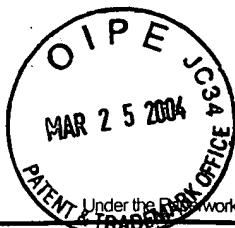
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PTO/SB/08B(10-01)

Approved for use through 10/31/2002. OMB 0651-0031

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		Number - Kind Code ² (if known)			
30	US- 5,764,518	06-09-1998	Collins		
31	US- 5,837,832	11-17-1998	Chee et al.		
32	US- 5,945,334	08-31-1999	Besemer et al.		
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		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				
48	WO 95/00530		01-05-1995	Affymax Technologies		
49	WO 95/33846		12-14-1995	Affymax Technologies		
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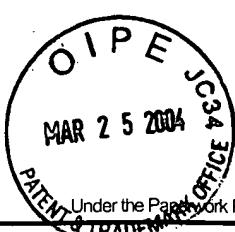
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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS		
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	57	Atkinson et al., "Solid-Phase Synthesis of Oligodeoxyribonucleotides by the Phosphitriester Method," IRL Press, Gait, ed., Washington, D.C., Chapt. 3, pp. 35-81 (1984)
	58	Barnett et al., "Debenzoylation of N-Benzoylnucleoside Derivatives with Ethylenediamine-Phenol," <i>Tetrahedron Lett.</i> , 22:991-994 (1981)
	59	Beaucage et al., "Deoxynucleoside Phosphoramidites -- A New Class of Key Intermediates for Deoxypolynucleotide Synthesis," <i>Tetrahedron Lett.</i> , 22(20):1859-1862 (1981)
	60	Caruthers et al., "New Methods for Synthesizing Deoxynucleotides," <i>Genetic Eng.</i> , 4:1-17 (1982)
	61	Feldman et al., "Gray Code Masks for Sequencing by Hybridization," <i>Genomics</i> , 23:233-235 (1994)
	62	Froehler et al., "Synthesis of DNA via Deoxynucleotides H-Phosphonate Intermediates," <i>Nucleic Acids Res.</i> , 14(13):5399-5407 (1986)
	63	Froehler et al., "Nucleoside H-Phosphonates: Valuable Intermediates in the Synthesis of Deoxyoligonucleotides," <i>Tetrahedron Lett.</i> , 27(4):469-472 (1986)
	64	Guo et al., "Direct Fluorescence Analysis of Genetic Polymorphisms by Hybridization with Oligonucleotide Arrays on Glass Supports," <i>Nucleic Acids Res.</i> , 22(24):5456-5465 (1994)
	65	Hogrefe et al., "Deprotection of Methylphosphonate Oligonucleotides Using a Novel One-Pot Procedure," <i>Nucleic Acids Res.</i> , 21(9):2031-2038 (1993)
	66	Jones, "Preparation of Protected Deoxyribonucleosides," <i>Oligonucleotide Synthesis: A Practical Approach</i> , IRL Press, Gait, ed., Washington, D.C., Chapter 2 (1984)
	67	Matteuci et al., "Synthesis of Deoxyligonucleotides on a Polymer Support," <i>J. Am. Chem. Soc.</i> , 103(11):3185-3191 (1981)
	68	McGillis, "Lithography," <i>VLSI Technology</i> , McGraw-Hill, Chapt. 7, pp. 267-301 (1983)
	69	Pease et al., "Light-Generated Oligonucleotide Arrays for Rapid DNA Sequence Analysis," <i>Proc. National. Acad. Sci. USA</i> , 91:5022-5026 (1994)
	70	Polushin et al., "Rapid Deprotection Procedures for Synthesis Oligonucleotides," <i>N.A.R. Symp. Ser.</i> , No. 24, pp. 49-50 (1991)
	71	Reichmanis et al., "O-Nitrobenzyl Photochemistry: Solution vs. Solid-State Behavior," <i>J. Polymer Sci. Polymer Chem.</i> , Ed., 23:1-8 (1985)
	72	Sinha et al., "β-cyanoethyl N, N-dialkylamino/N-morpholinomonochloro Phosphoamidites, New Phosphitylating Agent Facilitating Ease of Deprotection and Work-Up of Synthesized Oligonucleotides," <i>Tetrahedron Lett.</i> , 24(52):5843-5846 (1983)
	73	Sinha et al., "Polymer Support Oligonucleotide Synthesis XVIII: Use of β-cyanoethyl-N, N-dialkylamino/N-morpholinomonochloro Phosphoamidite of Deoxynucleosides for the Synthesis of DNA Fragments Simplifying Deprotection and Isolation of the Final Product," <i>Nucl. Acids Res.</i> , 12(11):4539-4557 (1984)
	74	Sproat et al., "Solid-Phase Synthesis of Oligodeoxyribonucleotides by the Phosphotriester Method," <i>Oligonucleotide Synthesis: A Practical Approach</i> IRL Press, Gait, ed., Washington, D.C., Chapt. 4, pp. 83-115 (1984)
	75	Young and Davis, "Efficient Isolation of Genes by Using Antibody Probes," <i>Proc. National. Acad. Sci. USA</i> , 80:1194 (1983)

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